

## Dynamics of nuclear spins with equal constants of spin-spin interaction

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### Abstract

The dynamics of a system of interacting nuclear spins placed in a nanocontainer are considered. An exact solvable model for describing the dynamics of the investigated system is formulated. Relations that express free induction decay and the shape of the NMR line that are valid for low temperatures are found. The possibility of comparing theoretical calculations to the experimental data in order to control nanocavities in materials and to investigate ordered spin structures is discussed. © 2011 Allerton Press, Inc.

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